

Amendment

U.S. Patent Application No. 09/475,385

group,” while reciting that the “organic group is an aromatic group,” which would exclude most of the C<sub>1</sub>-C<sub>12</sub> alkyl group members. For the following reasons, this rejection is respectfully traversed.

The applicants have amended claim 40 to correct the informality indicated by the Examiner. Accordingly, this rejection should be withdrawn.

At page 3 of the Office Action, the Examiner rejects claims 19, 22, and 39-50 under 35 U.S.C. §102(a) as being anticipated by International Published Application No. WO 96/18456 or under 35 U.S.C. §102(e) as being anticipated by Boes et al. (U.S. Patent No. 5,807,494). According to the Examiner, WO 96/18456 or Boes et al. teaches a modified carbon black that can be used as a liquid, a gas or a vapor adsorbent, comprising a carbon black having at least one organic group directly attached, wherein the organic group can be an aromatic group or a C<sub>1</sub>-C<sub>12</sub> alkyl group. The Examiner also asserts that the aromatic group may be further substituted and the C<sub>1</sub>-C<sub>12</sub> alkyl group can have an acidic group having a pKa of less than 11. Furthermore, the Examiner asserts that the carbon black may be pelletized and have increased water dispersibility. For the following reasons, this rejection is respectfully traversed.

The claimed invention relates to a method to adsorb an adsorbate by contacting the adsorbate with a modified carbonaceous material capable of adsorbing the adsorbate, wherein the modified carbonaceous material includes at least one organic group attached to a carbonaceous material.

With respect to Examiner's rejection under 35 U.S.C. §102(a) in view of the International Published Application No. WO 96/18456, the cited reference is not prior art to the claimed invention. According to 35 U.S.C. §102(a), the publication must have been published prior to the filing date of the present invention. The present application has a filing date of December 30, 1999

Amendment

U.S. Patent Application No. 09/475,385

and an effective filing date of June 14, 1996 due to the parent application. International Published Application No. WO 96/18456 was published after this date with a publication date of June 20, 1996. Therefore, WO 96/18456 is not prior art. Accordingly, the rejection under 35 U.S.C. §102(a) over the International Published Application No. WO 96/18456 should be withdrawn. OK

Boes et al. relates to a gel composition, which includes a carbonaceous component attached to a gel component. According to column 8, lines 6-9 of Boes et al., the gel composition of Boes et al. may be utilized as a material for liquid, gas, or vapor adsorption. Boes et al. specifically shows that its gel composition includes a carbonaceous component attached to a gel component. Boes et al. simply does not teach a carbonaceous material without a gel component that is capable of adsorbing an adsorbate. Additionally, one skilled in the art, by reading the language of Boes et al., particularly "a gel composition may be utilized as a material for liquid, gas, or vapor adsorption," would conclude that the use of a carbonaceous material without a gel component would not produce a satisfactory result. Unlike Boes et al., the claims of the present application specifically recite that the adsorbing is done by the modified carbonaceous material. Boes et al., on the other hand, states that the gel composition is the adsorbant. This is quite different. As such, Boes et al. does not teach the claimed invention. Accordingly, this rejection should be withdrawn.

At page 4 of the Office Action, the Examiner rejects claims 20, 21, and 23-25 under 35 U.S.C. §103(a) as being obvious over Boes et al. in view of Golden et al. (U.S. Patent No. 5,135,548). The Examiner asserts that Boes et al. discloses all of the limitations of the claims except that the organic group salts are Na, Li, K, or NH<sub>2</sub>, and that the adsorbate is polar, such as water. According to the Examiner, Golden et al. discloses a carbon molecular sieve having a surface that is modified by impregnation to make it hydrophilic for adsorbing water. As such, the

Amendment

U.S. Patent Application No. 09/475,385

Examiner concludes that it would have been obvious to one skilled in the art, at the time of the invention, to use a hydrophilically modified carbon material to adsorb water in order to provide an adsorbent that is abundant and inexpensive to separate water vapor molecules from an air stream as well as other pollutants that are typically adsorbed. For the following reason, this rejection is respectfully traversed.

As appreciated by the Examiner, this §103 rejection is based on Boes et al. (prior art only under §102(e).) Accordingly, under §103(c), Boes et al. can not be applied in a §103(a) rejection, since Boes et al. and the present application are owned by the same assignee, namely, Cabot Corporation. Attached is a copy of the assignment relating to Boes et al. Accordingly, the rejection under 35 U.S.C. §103(a) over Boes et al. in view Golden et al. should be withdrawn.

At page 6 of the Office Action, the Examiner indicates that claim 51 is allowed. The applicants and the undersigned appreciate the indication of allowable subject matter and believe the comments set forth above should convince the Examiner that the remaining pending claims are in condition for allowance as well.

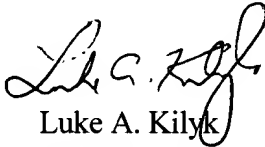
Amendment  
U.S. Patent Application No. 09/475,385

**CONCLUSION**

In view of the foregoing remarks, Applicants respectfully request the reconsideration of this application and the timely allowance of all the pending claims.

If there are any other fees due in connection with the filing of this response, please charge the fees to Deposit Account No. 03-0060. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and should also be charged to said Deposit Account.

Respectfully submitted,

  
Luke A. Kilyk  
Reg. No. 33,251

Atty. Docket No. 96074DIV (3600-011-01)  
KILYK & BOWERSOX, P.L.L.C.  
53 A East Lee Street  
Warrenton, VA 20186  
Tel: (540) 428-1701  
Fax.: (540) 428-1720

Enclosure: Recorded Assignment of U.S. Patent No. 5,807,494

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

40. (Twice Amended) A method to adsorb an adsorbate comprising contacting said adsorbate with a modified carbonaceous material capable of adsorbing said adsorbate wherein said modified carbonaceous material comprises at least one organic group attached to a carbonaceous material, wherein said organic group comprises an aromatic group [or a C<sub>1</sub>-C<sub>12</sub> alkyl group] directly attached to the carbonaceous material, with the proviso that said carbonaceous material is not activated carbon, wherein said organic group is an aromatic group [of] having the formula A<sub>y</sub>Ar-, wherein Ar is an aromatic radical and A is a substituent on the aromatic radical, and y is an integer from 1 to the total number of -CH radicals in the aromatic radical.